**TABLE 3.1-6 Estimated Hazard Quotients for Members of the General Public near the Portsmouth Site under Existing Environmental Conditions[a]**

| Environmental Medium | Parameter | Assumed Exposure Concentration | Estimated Chronic Intake (mg/kg-d) | Reference Level[b] (mg/kg-d) | Hazard Quotient[c] |
|---|---|---|---|---|---|
| Air[d] | Uranium | 0.0013 μg/m$^3$ | $3.7 \times 10^{-7}$ | 0.0003 | 0.0012 |
| | HF | 0.094 μg/m$^3$ | $2.7 \times 10^{-5}$ | 0.02 | 0.0013 |
| Soil[e] | Uranium | 6.8 mg/kg | $9.1 \times 10^{-5}$ | 0.003 | 0.030 |
| Surface water[f] | Uranium | 5.7 μg/L | $3.1 \times 10^{-6}$ | 0.003 | 0.0010 |
| | Fluoride | 400 μg/L | $2.2 \times 10^{-4}$ | 0.06 | 0.0037 |
| Sediment[f] | Uranium | 5.6 mg/kg | $1.5 \times 10^{-6}$ | 0.003 | 0.0005 |
| Groundwater[g] | Uranium | 27.5 μg/L | $7.9 \times 10^{-4}$ | 0.003 | 0.26 |

[a] The receptor is assumed to be a long-term resident near the site boundary or another off-site monitoring location that would have the highest concentration of the contaminant being addressed; reasonable maximum exposure conditions were assumed. Only the exposure pathway contributing the most to intake levels was considered (i.e., inhalation for air and ingestion for soil, sediment, surface water, and groundwater). Residential exposure scenarios were assumed for air, soil, and groundwater analyses; recreational exposure scenarios were assumed for surface water and sediment analyses.

[b] The reference level is an estimate of the daily human exposure level that is likely to be without an appreciable risk of deleterious effects. The reference levels used in this assessment are defined in Appendix F.

[c] The hazard quotient is the ratio of the intake of the human receptor to the reference level. A hazard quotient of less than 1 indicates that adverse health effects resulting from exposure to that chemical alone are unlikely.

[d] Maximum concentrations from among property-line and farther off-site sampling locations were used for assessment of general public exposures. Fluoride was reported, which was used as a surrogate for HF. Air exposure concentrations are the maximum annual average reported for all property-line and off-site monitoring locations (DOE 2002c,d). Sample numbers: 12 per location for uranium; 52 per location for fluoride.

[e] The soil exposure concentration is the maximum value from 31 property-line and off-site sampling locations (DOE 2002d). Sample numbers: 2 per location.

[f] Surface water and sediment exposure concentrations are the maximum annual averages reported for all NPDES outfall locations and other off-site monitoring locations, including cylinder yard runoff locations (DOE 2002c,d).

[g] Groundwater exposure concentration is the upper-end concentration reported for all on-site monitoring wells in 2000 (DOE 2001e). These wells are not used for drinking water. Several additional substances exceeded drinking water standards or guidelines in 2000; only uranium is listed here because it is of particular interest for this EIS. Specific concentrations were not available but were stated to be similar to 2000 concentrations (DOE 2002d). Fluoride concentrations were not available.